IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

TIVO INC.,	
Plaintiff,	Case No. 2:15-CV-1503-JRG
vs.	**JURY TRIAL DEMANDED**
SAMSUNG ELECTRONICS CO., LTD. and SAMSUNG ELECTRONICS AMERICA, INC.	
Defendants.	
SAMSUNG ELECTRONICS CO., LTD. and SAMSUNG ELECTRONICS AMERICA, INC.,	
Counterclaim Plaintiffs,	
vs.	
TIVO INC.,	
Counterclaim Defendant.	

TIVO'S P.R. 4-5(c) REPLY CLAIM CONSTRUCTION BRIEF

10063032

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Page(s)

Cases

TABLE OF AUTHORITIES
(continued)

Page

Statutes

I.   INTRODUCTION

Samsung provides no reason for the Court to depart from its constructions in previous cases. Samsung instead contradicts the intrinsic record, the Court's prior constructions, and the Federal Circuit's affirmance of those constructions. TiVo's constructions should be adopted.

II.   SAMSUNG PROVIDES NO JUSTIFICATION TO ALTER THE TIME WARP PATENT CONSTRUCTIONS

A.   The Federal Circuit's affirmance on "object" is controlling and correct

Samsung pays mere lip service to the Federal Circuit's affirmance of the construction of the "object" terms. Samsung's only response is a footnote stating that its argument is "an issue of first impression." Samsung's conclusory assertion in its brief that "[n]either *stare decisis* nor estoppel prevent Samsung from raising this issue now" is incorrect.

First, Samsung fails to address the Federal Circuit and other authority TiVo cited explaining that *stare decisis* precludes varying a previously affirmed construction.[1] Courts in this district also have reiterated this principle expressly. In *Eolas Techs., Inc. v. Adobe Sys.*, No. 6:09-CV-00446-LED, 2011 U.S. Dist. LEXIS 157891 (E.D. Tex. Sept. 23, 2011), the Court concluded that it was bound to apply the construction from a previous Illinois case where the Federal Circuit affirmed the construction. *Id.* at *1. Later defendants asserted that a new construction of the affirmed terms was appropriate because "the issue was not squarely addressed when the Federal Circuit affirmed the [Illinois] Court". *Id.* at *24. The Court carefully considered "whether the Court is bound by the principle of *stare decisis* to adopt the Illinois District Court's construction … as affirmed by the Federal Circuit. After a thorough analysis of the case law, the answer is yes." *Id.* at *25. The court in *Eolas* also rejected the argument Samsung now makes

---

[1] *See, e.g., Miken Composites, L.L.C. v. Wilson Sporting Goods Co.*, 515 F.3d 1331, 1338 (Fed. Cir. 2008) ("[F]or us not to adopt the same claim construction in a case such as this, in which the construction of the claim term in question was a necessary predicate to the determination of a prior litigation before this court … would run counter to the Supreme Court's guidance on *stare decisis* in *Markman*."); *Hynix Semiconductor Inc. v. Rambus Inc.*, 645 F.3d 1336, 1351 (Fed. Cir. 2011); *Function Media, L.L.C. v. Kappos*, 508 F. App'x 953 (Fed. Cir. 2013); *Metro. Life Ins. Co. v. Bancorp Servs., L.L.C.*, 527 F.3d 1330, 1335-36 (Fed. Cir. 2008); *Aspex Eyewear, Inc. v. Concepts In Optics, Inc.*, 211 F. App'x 955, 957 (Fed. Cir. 2007).

that a later defendant can avoid the impact of the previous decision by framing the issue differently. In doing so, the court explained that "the principle of *stare decisis* would lose all meaning if a later defendant could unbind itself by merely framing the issue differently. The Supreme Court has decided that claim construction is a matter of law; thus, when the Federal Circuit construes a term, it does so as a matter of law and its holding is binding." *Id.* at *26.

Even on its merits, Samsung's argument is not "an issue of first impression." Samsung seeks to import into the claims a part of the specification related to programming languages such as C++. Samsung asserts in its opposition that "object" should be so limited because "a number of other [programing] languages would have equivalents to the C++ embodiment described in the specification." Opp. at 14. But this "programming language" argument was rejected in *EchoStar,* and affirmed on appeal. *TiVo, Inc. v. EchoStar Commc'ns Corp.*, 516 F.3d 1290, 1306 (Fed. Cir. 2008) (*EchoStar Appeal*) ("EchoStar urged the court to define the term 'object' as meaning an item written with an object-oriented computer programming method **such as C++.**") The Federal Circuit affirmed that the intrinsic record is "not sufficient to require that the claims be limited to embodiments using **C++ or a similar programming language**." *Id*. at 1307. Samsung's argument that the claims should be limited to C++ or equivalent languages has been resolved.

In seeking to justify its flawed means plus function analysis, Samsung also incorrectly asserts that "TiVo contends that these are not means-plus-function limitations because software is *per se* sufficiently definite structure." Opp. at 10. TiVo did not rest on a *per se* rule but explained "[a] limitation has sufficient structure when it recites a claim term with a structural definition that is either provided in the specification or generally known in the art." *Apple Inc. v. Motorola, Inc*., 757 F.3d 1286, 1299 (Fed. Cir. 2014). The Federal Circuit has made clear that in TiVo's patents, "object" is not a "generic reference to software," as Samsung contends. Opp. at 12. Rather, as the *Apple* case instructs, it is "generally known in the art" to refer to "a collection

of data and operations." *Apple*, 757 F.3d at 1299; *EchoStar Appeal*, 516 F.3d at 1306-07.

Samsung also ignores that "'[s]tructure' to a person of ordinary skill in the art of computer-implemented inventions may differ from more traditional, mechanical structure. For example, looking for traditional 'physical structure' in a computer software claim is fruitless because software does not contain physical structures." *Apple*, 757 F.3d at 1298. Samsung cannot overcome the presumption against the application of section 112(f) to the "object" terms.

B.   The "input section" and "output section" comprise definite structure

Samsung also has not met its burden to overcome the presumption against applying section 112(f) to "input section" and "output section," each of which were previously construed in *EchoStar* without resort to 112(f). TiVo's opening brief explained the "inputs, outputs, and connections" of the terms in the context of the claims and specification. Br. at 7-8. Samsung's response is essentially a conclusory assertion that "the surrounding claim language is also devoid of structure" (Opp. at 3) and a declaration that adds no meaningful support. Samsung's "analysis" does not and cannot demonstrate that section 112(f) applies.

Samsung first offers unfounded criticism of TiVo for relying on Federal Circuit law holding that "[s]tructure may also be provided by describing the claim limitation's operation, such as its input, output, or connections." *Apple*, 757 F.3d at 1299; Opp. at 4. But in refusing to invoke section 112(f) this Court recently cited *Apple* in *Intellectual Ventures II LLC v. BITCO Gen. Ins. Corp.,* No. 6:15-cv-59, 2016 WL 125594, at *8 (E.D. Tex. Jan. 11, 2016) and held that "the claims and specification provide such detail [intrinsic evidence for the inputs, outputs, connections and operation of the recited element]." Samsung does not suggest that *Apple* is wrong, it merely suggests that more is required. Opp. at 5 ("absent more, the evidence weighs in favor of finding…"). Samsung's suggestion that the requirements set forth in *Apple* are insufficient does not meet the burden needed to overcome a presumption against section 112(f).

Samsung also incorrectly asserts that "section" is a nonce word. Opp. at 3. Not only are

many cases to the contrary,[2] the claims do not use "section" in isolation. Rather, "input section" and "output section" refer to specific structure to a person of ordinary skill. Ex. A ¶ 88-91.

Ample extrinsic evidence makes clear that "input section" and "output section" are terms of art referring to structure. For example, U.S. Pat. No. 4,642,691 entitled "Television Signal Input Filter" from 1987 discusses "the VHF **input section** of a television receiver." Ex. B, 1:59-60. The patent further depicts structure of this "input section" in Figure 1. *Id.; see also* U.S. Pat. No. 4,956,710 entitled "Television Receiver Tuner High Pass Input Filter With CB Trap" at Ex. C, 2:32-36 ("there is shown in FIG. 1 a block diagram of an **input section** of a representative television receiver tuner generally designated 10."); Ex. A ¶ 89. "VCR Troubleshooting and Repair" (3rd Ed.) explains "[n]o matter what type or size box is used to package the recorder, the basic workings inside are common. There must be an **input section**, a recorder section, a storage medium, and an **output section** as shown in Fig. 1.1." Ex. D at 4-5; Ex. A ¶ 90. "Input section" was a known term reflecting definite structure related to receiving input signals. Ex. A ¶ 91.

Even if Samsung could show that "input section" is governed by 112(f), and it cannot, Samsung's proposed construction is fundamentally flawed because it seeks to import components not necessary for the proposed function. TiVo's brief at 8-9 explained some ways Samsung's "structure" imports unnecessary components. Samsung agrees, in its eleventh-hour modified proposal, to remove some unnecessary structure (a "parser"). Opp. at 6 n.2. However, Samsung still seeks to import a "demultiplexor" into the "input section." *See, e.g.,* '389, 3:44-59, 6:30-35. A demultiplexor extracts a single program from an input including multiple programs multiplexed together for transmission. Ex. A ¶ 94; '389, 6:30-35. Because a DVR does not always receive a multiplexed input, demultiplexing is only needed on a multiplexed input such as "an **MPEG2** transport multiplex." '389, 3:44-59; Ex. A ¶ 94 ("An **MPEG2 transport multiplex**

---

[2] *See, e.g.*, *Server Technology, Inc. v. American Power Conversion Corporation*, No. 3:06-cv-698, 2010 WL 1610395 (D. Nev. Apr. 19, 2010) (refusing to apply 112 (f) to "power control sections"); *MGM Well Services Inc. v. Mega Lift Systems LLC*, No. 05-1634, 2006 WL 322586 (S.D. Tex. Feb. 10, 2006) (refusing to apply 112 (f) to "bulging section").

supports multiple programs in the same broadcast channel, … The Input Section 101 … extracts a specific MPEG program out of it."). This is reflected in the proposed 112(f) function of "input section" which refers to operating on **MPEG** streams generally, rather than **MPEG2** transport streams specifically. The general MPEG input format includes single program streams. *Id.* Since the demultiplexor is not required when the input does not include multiplexed programs (when it is operating on MPEG as opposed to MPEG2 input), it is not a required part of the "input section." *Northrop Grumman Corp. v. Intel Corp.*, 325 F.3d 1346, 1352 (Fed. Cir. 2003).

Samsung's argument, in a footnote, that the Court's prior construction of "output section" allegedly "conflates the claimed 'Output Section' with the distinctly claimed 'decoder'" is without merit. Opp. at 8 n.5. There is no requirement that the decoder be separate from the output section. That features are recited as distinct claim elements does not translate into a requirement of separate structural components. *Powell v. Home Depot U.S.A., Inc.,* 663 F.3d 1221, 1231-32 (Fed. Cir. 2011) (despite that "'cutting box' and 'dust collection structure' are distinct terms" this "does not suggest that the claim terms require separate structures."). Indeed, the patent teaches otherwise, explaining how in one embodiment, "[t]he Output Section 103 **contains** an MPEG decoder." '389, 4:5-6. That is, the decoder may be contained within the output section. Samsung's argument that the "output section" and "decoder" must be separate is incorrect and would exclude this embodiment. The Court should continue to apply its prior construction for "output section."

C.   "Media switch" was previously construed

Samsung suggests that there is disagreement on the construction of "media switch" and that the Court did not address this term alone in its prior constructions. This is not correct. First, the Court in *EchoStar* expressly construed the shorter term "media switch": "As used in the '389 patent, 'Media Switch' is hardware and/or code that mediates between a microprocessor CPU, hard-disk or storage device, and memory." *TiVo Inc. v. EchoStar Comm'ns Corp.*, No. 2:04-cv-1,

2015 WL 6225413, at *8-9 (E.D. Tex. Aug. 18, 2005) (*EchoStar Markman*). Second, the parties agree on the meaning of the term "media switch."

Samsung also misquotes the prior *EchoStar* construction, replacing the word "analyze" with "parse." Samsung states "[t]his Court previously construed this term as 'providing hardware and/or code that mediates between a microprocessor CPU, hard-disk or storage device, and memory, wherein said device, portion of a device, or code **parses** said MPEG stream, said MPEG stream is separated into its video and audio components.'" The prior construction uses the word "analyzes," not "parses." If the Court decides to construe the larger phrase (unnecessary as there is no dispute – the parties agree on constructions for both "parse" and "separate"), it should not adopt Samsung's modified version but should adopt the construction actually used in *EchoStar*: "providing hardware and/or code that mediates between a microprocessor CPU, hard-disk or storage device, and memory, wherein said device, portion of a device, or code **analyzes** said MPEG stream, said MPEG stream is separated into its video and audio components."

III.   SAMSUNG'S MEDIA SWITCH PATENT ARGUMENTS LACK MERIT

A.   "Media switch" and "input section" mean the same thing in related patents

1.   "media switch"

Samsung inexplicably states that "TiVo contends that the term's meaning varies patent-by-patent." This is not TiVo's argument. Rather, TiVo said: "The Court should give the term 'media switch' in claim 1 of each of the Media Switch Patents the same construction as the 'media switch' in the Time Warp Patent." Br. at 16. The only question is the correct construction for the "media switch" standing on its own. But the Court answered this question in *EchoStar*.

Samsung's only dispute stems from its improper attempt to read "parsing" and "separating" limitations from the Time Warp Patent claims into the Media Switch Patent claims. But black letter law states that such attempts are improper. *SRI Int'l. v. Matsushita Elec. Corp. of America*, 775 F.2d 1107, 1122 (Fed. Cir. 1985). The Media Switch Patents do not recite

"parsing" and "separating" functions. The "media switch" performs many functions, not all of which are claimed in every claim. For example, Time Warp claims 31 and 61 require "parsing" but not "separating" which are distinct functions. *EchoStar Markman*, 2005 WL 6225413, at *9. ("the terms are not interchangeable."). Similarly, Claim 1 of each Media Switch Patent claims devices used for mediating between the various structural components, but neither "parsing" nor "separating." Ex. A ¶ 104-105. "Media switch" in each related patent should be given an identical meaning—"hardware and/or code that mediates between a microprocessor CPU, hard-disk or storage device, and memory"—without the extraneous limitations Samsung seeks to add.

2. "input section"

The Federal Circuit has frequently noted "the established rule of claim interpretation that dictates that like terms should be construed consistently across related claims." *Advanced Cardiovascular Sys., Inc. v. Medtronic Vascular, Inc.,* 182 F. App'x 994, 998–99 (Fed. Cir. 2006). Samsung's suggestion that the identical term "input section" in three related patents should be given a different meaning runs contrary to this "established rule." Samsung's constructions are confusing and improperly redefine "input section" for related patents.

B. "Media manager" is not indefinite

The claim language is unambiguous: "the media switch comprises a media manager." The "media manager" is a sub-part of the "media switch." Samsung's contention that the "media switch" and "media manager" are "mutually exclusive" contradicts the plain claim language. Samsung also improperly relies on extrinsic evidence to make a "mutual exclusivity" argument. *See Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1369 (Fed. Cir. 2003) ("Extrinsic evidence may never be relied upon [] to vary or contradict the clear meaning of terms in the claims.").

The specification also teaches the relationship between the "media switch" and the "media manager." The specification explains the "media switch's" mediating functions. Br. at 21. The specification then further describes another embodiment with more detail about

"mediating" between components using a "media manager" as explained in TiVo's opening brief. In these embodiments, some of the "Media Switch's" mediating functions are performed by the "media manager" it contains. Ex. A ¶ 116. Samsung claims that TiVo's inventor testimony "underscored the mutually exclusive nature" of these two elements, but the cited testimony does not support such a claim. Rather, the inventor explained that "[the 'media manager'] incorporated the media switch functionality." Ex. E (Lockett depo), 40:11-12. Just as the specification explains, the "media manager" in one embodiment is the part of the "media switch" that incorporates some specific mediating functions. Ex. A ¶ 116.

Where, as here, the claims "read in light of the specification, provide sufficient detail such that a person of ordinary skill in the art would understand them with reasonable certainty," those claims are not indefinite under *Nautilus*. *Cox Communications, Inc. v. Sprint Communication Company*, No. 2016 WL 5335038, at *6 (Fed. Cir. 2016). Samsung's bare citation to *Nautilus* does nothing to undermine the conclusion that one of skill in the art would readily understand the claims and specification to teach that the media switch may contain a media manager. Samsung certainly has not offered anything constituting clear and convincing evidence to the contrary. *Id.*

IV. SAMSUNG'S TRICK PLAY PATENT ARGUMENTS ARE WITHOUT MERIT

A. Applicant's express lexicography of "linear cache" is controlling

The parties agree that "a key component of the invention is the Linear Cache (LC)." Opp. at 21 (citing '195, 6:53). But Samsung ignores the lexicographical definition of that "key component" and instead focuses on a specific "use" of the LC in one embodiment. '195 at 6:55 ("The **LC is used** to store…"). This is improper. An applicant's express lexicography is controlling. Br. at 26-27; Ex. A ¶ 117-119.

In challenging TiVo's construction, Samsung makes a number of inaccurate assertions. Samsung misstates TiVo's proposed construction: "TiVo argues that the inventor acted as his

own lexicographer and redefined 'linear cache' as merely 'a general device for buffering.'" Opp. at 22. Rather, the applicant defined "linear cache" as: "a general device for buffering **the information contained in a stream of digital information.**" The portion that Samsung omits addresses the "linear" aspect. The specification explains how the "invention provides a method and apparatus for providing pass through or capture of **continuous linear streams of digital information** represented in various formats." '195, 4:15-18. The "linear cache" is directed to capturing these linear streams of digital information input into the DVR.

Samsung also ascribes a meaning to "linear" that is not in accordance with the claims. Samsung argues that "linear" means that the data must be "stored in a proper sequence." But the specification nowhere equates "linear" with the "proper sequence" for storing data. In fact, a separately claimed "synchronization means" is used because data may be stored asynchronously and non-sequentially: "The number of streams which must be synchronized may be arbitrary, and each stream may be represented using different and unique storage and compression techniques which have their own synchronization requirements and inter-frame relationships." '195, 3:49-54. One purpose of the synchronization means is thus to play back data stored non-linearly. Ex. A ¶ 121. There is no requirement to store data in a linear sequence, or this purpose of the synchronization means would be unnecessary.

B.   **"Synchronization/cache access/control means" issue was resolved in *Motorola***

The parties agree on the algorithm identified in the Court's prior construction. Samsung's only justification to re-raise this settled issue from *Motorola* is Samsung's claim that Federal Circuit case law changed to require "an operative algorithm." However, the Court's reasoning based on the *Telecordia* case remains sound and Samsung presents no clear and convincing evidence that the cited algorithm is not "operative." Moreover, the algorithm is operative even on a single cache system. The algorithm synchronizes a key stream to an input PTS value: "the BC requests repositioning of an LC by specifying a PTS value. … If the LC is marked as a key

stream, the LC scans the blocks in the cache to find the key frame which is nearest to the requested PTS value, searching both before and after the desired value." '195, 7:48-51. Here, the single cache marked as a key stream cache is synchronized to an input PTS. Ex. A ¶ 136.

On the "cache access means"/ "cache control means," Samsung again agrees with the Motorola Constructions when its indefiniteness arguments fail. But Samsung again incorrectly argues that principles relied upon from *Telecordia* are unsound. Opp. at 25. Samsung also incorrectly states that "the specification fails to disclose algorithms" for the "buffer controller" performing the claimed functions. But the specification explains various trick play algorithms in minute detail. *See e.g.* '195, 8:1-9:20 ("The following subsections describe in detail how positioning operations are handled by the LC."); Ex. A ¶ 128-132. Samsung's recycled indefiniteness arguments must fail again.

C.   Claim 119 is not indefinite

Samsung's indefiniteness arguments for claim 119 are without merit. First, the claim does not lack antecedent basis. *See* Br. at 29-30. Second, the specification makes clear from which linear cache the data is discarded. The specification explains that a "capture mechanism" provides data to the linear cache and identifies certain frames as "key frames." '195, 7:4-5, 16-19. "For example, the I-frame of an MPEG GOP is marked as a key frame by the capture mechanism." *Id.*at 7:24-25. Moreover, "the LC only allows positioning of the stream to a block marked as a key frame." *Id.* at 7:20-22. Additionally, the linear cache "discards" key frames when they are older than the window. *Id.* at 7:10-13. It is thus clear the linear caches to which claim 119 refers: those LC's that include key frames, such as I- frames. Ex. A ¶ 139.

V.   <u>CONCLUSION</u>

The Court should adopt both its previous constructions and TiVo's proposals for terms not previously construed, which are consistent with the intrinsic record.

Dated: October 3, 2016   Respectfully submitted,

                                                /s/ Benjamin Haber
                                                Benjamin Haber

                                                MCKOOL SMITH PC
                                                Sam Baxter, Lead Attorney
                                                Texas State Bar No. 01938000
                                                sbaxter@mckoolsmith.com
                                                McKool Smith
                                                300 Crescent Court, Suite 1500
                                                Dallas, Texas 75201
                                                TEL: 214.978.4016
                                                FAX: 214.978.4044

                                                IRELL & MANELLA LLP
                                                Morgan Chu
                                                mchu@irell.com
                                                Andrei Iancu
                                                aiancu@irell.com
                                                Richard M. Birnholz
                                                rbirnholz@irell.com
                                                Thomas C. Werner
                                                twerner@irell.com
                                                1800 Avenue of the Stars, Suite 900
                                                Los Angeles, California 90067-4276
                                                Telephone: (310) 277-1010
                                                Facsimile: (310) 203-7199
                                                Attorneys for Plaintiff TiVo Inc.

PROOF OF SERVICE

I am employed in the County of Los Angeles, State of California. I am over the age of 18 and not a party to the within action. My business address is 1800 Avenue of the Stars, Suite 900, Los Angeles, California 90067-4276.

On October 3, 2016, I served the foregoing document described as **TIVO'S P.R. 4-5(c) REPLY CLAIM CONSTRUCTION BRIEF** on each interested party.

|X| (BY ELECTRONIC MAIL) I caused the foregoing document to be served electronically by electronically mailing a true and correct copy through Irell & Manella LLP's electronic mail system to the e-mail address(es) reflected on the service email, and the transmission was reported as complete and no error was reported.

Executed on October 3, 2016, at Los Angeles, California.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Benjamin Haber	*/s/ Benjamin Haber*
(Type or print name)	(Signature)